

C) REMARKS**INFORMALITIES**

The applicants have amended claims 1, 6, 7, 8, 12, and 26 in accordance with the Examiner's suggestion. Claims 10, 11, 21, 22, 25, 29 and 30 have been cancelled.

ANTICIPATION

The Examiner rejected claims 1 and 13 under 35 U.S.C. § 102(e) as being anticipated by Hsieh, et al. United States Patent No. 6,466,645. More specifically, the Examiner rejected the present application on the grounds that the '645 reference is dedicated to "determining whether the x-ray tube output was reduced to nearly zero for a period of time." The Examiner then further explains that Hsieh et al. discloses a method "for detecting and correcting tube-spit events comprising the steps of monitoring a generator output from a CT system generator." Office Action, p. 4, ¶15.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F. 2d 628, 631, 2 U.S.P.Q. 1051, 1053 (Fed. Cir. 1987). The quoted reference to the '645 patent does not disclose the step of monitoring the generator output from a CT system generator, nor does the remainder of the text of the patent mention monitoring *generator output*. The '645 reference is instead dedicated to measuring *x-ray tube output*.

More specifically, the '645 patent discloses "using a sample of projection data which has already been collected and preprocessed in accordance with normal processing algorithms including applying a detector primary speed correction to the projection data." Column 1, lines 57-59. That is, tube spit detection occurs in the image

reconstruction process. The method of the present invention monitors the generator waveforms to determine whether a drop in generator power occurs, thus eliminating the more computationally intensive previous methods which reconstruct the image before determining whether a tube spit has occurred. As such, claims 1 and 13 are not anticipated by the '645 reference.

OBVIOUSNESS

Additionally, the Examiner rejected claims 2 through 12 and claims 14 through 32 under 35 U.S.C. § 103 as being unpatentable over the '645 reference. As an initial matter, it is believed that claims 2 through 10, 14 through 20, 23 through 24, 26 through 28 and 31 are patentable as they depend on patentable base claims.

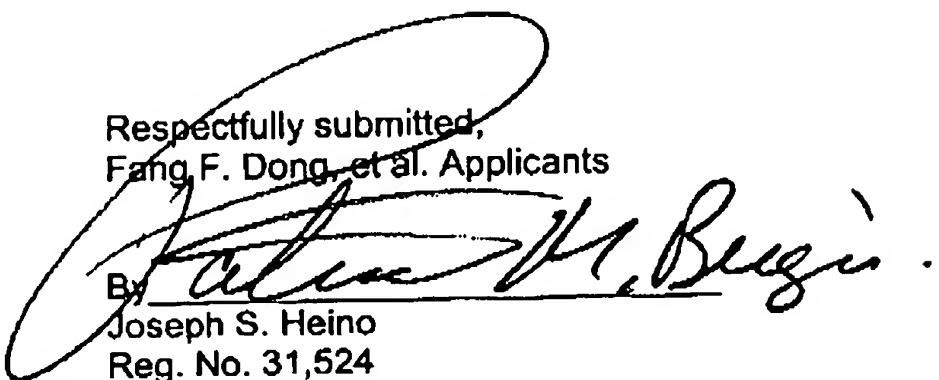
In order to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference or references must teach or suggest all of the claimed limitations. This teaching or suggestion to combine must be found in the prior art, and not based on the applicant's disclosure.

As an initial matter, the '645 reference does not teach or suggest the limitation of monitoring generator output, which the Examiner admits at Page 5, ¶19 of the Office Action. Additionally, the applicants respectfully suggest that the Examiner now views the present invention with impermissible hindsight afforded by the disclosure of the present invention.

The present invention provides for a novel method for tube spit correction which does not require the complex computational image reconstruction of prior techniques. Instead, the present invention provides for monitoring the output of a CT system generator. Upon detecting a reduced output, the method provides for view interpolation between an immediately previous view in which CT system generator output was above a certain threshold and the next view in which CT system generator output is above the threshold level.

The amended claims now more particularly point out and claim this unique method for tube spit correction of the present invention. The applicants respectfully submit that these, and other, novel features are not found in the prior art cited. Allowance of all claims now presented is respectfully requested.

Respectfully submitted,
Fang F. Dong, et al. Applicants

By 
Joseph S. Heino
Reg. No. 31,524
DAVIS & KUELTHAU, s.c.
111 E. Kilbourn Ave., Ste. 1400
Milwaukee, WI 53202-1633
(414) 225-1452

Patrick M. Bergin
Reg. No. 54,994
DAVIS & KUELTHAU, s.c.
111 E. Kilbourn Ave., Ste. 1400
Milwaukee, WI 53202-1633
(414) 225-7563